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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

9/26/2011

In the Matter of Remedial Action by:	AGREED ORDER
Vaagen Brothers Lumber Co., Inc.	No. 8613

TO: Mr. Patrick Risken
Evans, Craven & Lackie, P.S.
818 W. Riverside, Suite 250
Spokane, WA 99201

TABLE OF CONTENTS

I. INTRODUCTION

The mutual objective of the State of Washington, Department of Ecology (Ecology) and Vaagen Brothers Lumber Co., Inc. (Vaagen) under this Agreed Order (Order) is to provide for remedial action at a facility known as the Van Stone Mine Site (Site), in Stevens County, Washington, Facility Site ID 5418085, where there has been a release or threatened release of hazardous substances. This Order requires Vaagen to grant Ecology access to certain real property (Property), which is owned by Vaagen and located within the Site, for the purposes of investigating and remediating releases of hazardous substances at the Site. Ecology believes the actions required by this Order are in the public interest.

II. JURISDICTION

This Agreed Order is issued pursuant to the Model Toxics Control Act (MTCA), RCW 70.105D.050(1).

III. PARTIES BOUND

This Agreed Order shall apply to and be binding upon the Parties to this Order, their successors and assigns. The undersigned representative of each party hereby certifies that he or she is fully authorized to enter into this Order and to execute and legally bind such party to comply with this Order. Vaagen agrees to undertake all actions required by the terms and conditions of this Order. No change in ownership or corporate status shall alter Vaagen's responsibility under this Order. Vaagen shall provide a copy of this Order to all agents, contractors, and subcontractors retained to perform work required by this Order, and shall ensure that all work undertaken by such agents, contractors, and subcontractors complies with this Order.

IV. DEFINITIONS

Unless otherwise specified herein, the definitions set forth in RCW 70.105D and Chapter 173-340 WAC shall control the meanings of the terms in this Order.

A. Site: The Site is referred to as Van Stone Mine Site and is generally located approximately 24 miles northeast of Colville off Van Stone Road, Stevens County, Washington. The Site is defined by the extent of contamination caused by the release of hazardous substances

at the Site. Based upon factors currently known to Ecology, the Site is more particularly described in the Site Diagram (Exhibit A). The Site constitutes a Facility under RCW 70.105D.020(5).

B. Parties: Refers to the Washington Department of Ecology and Vaagen.

C. Potentially Liable Person (PLP): Refers to Vaagen.

D. Agreed Order or Order: Refers to this Order and each of the exhibits to this Order. All exhibits are integral and enforceable parts of this Order. The terms "Agreed Order" or "Order" shall include all exhibits to this Order.

E. Property: Refers to the real property that is currently owned by Vaagen located approximately 24 miles northeast of Colville off Van Stone Road, Stevens County tax parcel(s) 433400, 5038410, 5039550, 5041500, 5041600, 5041700, and 5041750, at least a portion of which is located within the Site.

V. FINDINGS OF FACT

Ecology makes the following findings of fact, without any express or implied admissions of such facts by Vaagen:

A. The Site is located in the northeastern part of Washington State approximately 24 miles northeast of Colville, WA. The Site is located within the Onion Creek watershed, which drains to the Columbia River approximately 7 miles away. The Site is composed of a currently dormant [lead and zinc] mining operation, with associated historic milling and disposal (waste rock and tailings) features. The Site is largely forested with areas of the Site exhibiting a variety of wildlife.

B. The Site is composed of four main areas: (1) The location of the former milling facility (now dismantled) and offices; (2) Waste rock piles and the mine workings area, including what are now pit lakes; (3) The Upper Tailings Pile; and (4) The Lower Tailings Pile.

C. Hecla Mining Company pursued early exploratory work at the Site and attempted a small underground development between 1926 and 1928. Additional exploratory work occurred in the 1940s.

D. American Smelting and Refining Company (Asarco) initiated mining activities at the Site in 1951 and operated at the Site until 1970. During those years, Asarco built and operated a 1000-tons-per-day floatation milling complex and mine infrastructure at the Site. During its operations, Asarco extracted an estimated 7,500,000 tons of rock at the Site, resulting in the production of 2,675,000 tons of ore.

E. Asarco initially slurried tailings (a waste byproduct of the milling process) approximately one-half mile down slope from its milling facility for disposal at what is now known as the Upper Tailings Pile. The Upper Tailings Pile is approximately 10 acres in size and is located adjacent to an unnamed tributary of Onion Creek, which travels downstream past the Onion Creek School. The Upper Tailings Pile contains an estimated 0.78 million tons of tailings.

F. In April 1961 the dam holding the Upper Tailings Pile catastrophically failed. This failure resulted in a release of tailings that flooded the adjacent tributary of Onion Creek. The flood destroyed or damaged downstream structures and property, and released tailings visibly traveled at least as far as the Onion Creek School, approximately 2 miles away.

G. The Upper Tailings Pile failure prompted Asarco to construct the Lower Tailings Pile, which was used until Asarco ceased operations in 1970. The Lower Tailings Pile is approximately 40 acres in size and is estimated to contain 1.82 million tons of tailings. The Lower Tailings Pile is located adjacent to another unnamed tributary of Onion Creek. This tributary joins with the tributary adjacent to the Upper Tailings Pile before flowing past the Onion Creek School.

H. Asarco dispensed of the Site properties in 1971. No further mining or milling activities occurred at the Site until 1990.

I. In 1990 Equinox Resources (Wash.) Ltd. (Equinox) purchased the mine complex. Equinox restarted operations in 1991 and extracted an estimated 1,270,000 tons of rock, resulting in the production of approximately 270,000 tons of ore. During Equinox's operations, a berm was constructed on the Lower Tailings Pile, dividing the Lower Tailings Pile into two lined impoundments.

J. Equinox ceased active mining and milling operations at the Site in 1993. The Site has remained largely dormant since that time. There have been limited Washington State Department of Natural Resources (DNR) approved reclamation activities occurring. These activities include the dismantling of the mill and removal of the tailings pond and disposal lines for slurried tailings.

K. As a result of inactivity at the mine, the area of the previous mineral workings has now filled up with water and has formed what are called the pit lakes. The largest of these lakes is the West End Pit Lake, which covers approximately 4 acres. Overflow from the West End Pit Lake flows into the tributary of Onion Creek that flows adjacent to the Upper Tailings Pile. In addition, small ponds have formed on both sides of the berm on top of the Lower Tailings Pile.

L. Studies conducted over the years demonstrate that hazardous substances have been released at the Site. Studies performed by DNR and the Environmental Protection Agency (EPA) show that soil concentrations of arsenic, cadmium, copper, lead, mercury, and zinc in the mill area, waste rock piles, and tailings piles exceed MTCA Method A cleanup levels for the protection of human health and the environment. Past releases have most notably occurred through erosion of the two tailings piles (including the catastrophic 1961 failure of the Upper Tailings Pile dam) and water infiltration into and through the tailings. Tailings containing heavy metals are locally dispersed within surrounding forested areas.

M. In addition, surface and ground water flow on and through the tailings and waste rock piles. Groundwater data collected by Equinox between 1990 and 1998 show numerous exceedances of MTCA Method A standards for arsenic, cadmium, and lead.

N. Current ownership of the Site area historically devoted to mining, milling, and disposal operations is divided between Equinox and Vaagen Brothers Lumber Co., Inc. Equinox owns identified parcels 5037700, 5038401, 5039302, 5039320, and 5041401, which include portions of the Lower Tailings Pile, the waste rock piles, and the location of the now-removed mill. Vaagen owns identified parcels 433400, 5038410, 5039550, 5041500, 5041600, 5041700,

and 5041750, which include portions of the Upper Tailings Pile, waste rock piles, and land affected by the 1961 failure of the Upper Tailings Pile.

O. In 2005 Asarco filed for reorganization under Chapter 11 of the United States Bankruptcy Code. *In RE: Asarco LLC,* No. 05-21207, U.S. Bankruptcy Court for the Southern District of Texas, Corpus Christi Division. Ecology filed a contingent proof of claim alleging debts that included prospective environmental cleanup costs associated with the Van Stone Mine Site. Ecology and Asarco reached a settlement on Ecology's claims that became incorporated into Asarco's approved reorganization plan. Order Confirming ASARCO Incorporated and Americas Mining Corporation's Seventh Amended Plan of Reorganization for the Debtors under Chapter 11 of the United States Bankruptcy Code, As Modified August 20, 23, 27, 2009 (U.S. District Court Order dated November 13, 2009). Under this settlement, Ecology received $3.5 million for its claim related to the Van Stone Mine Site. This amount has been deposited into a dedicated account per RCW 70.105D.130. All or part of this amount may, upon legislative appropriation, become available for Ecology to use for remedial actions at the Site.

VI. ECOLOGY DETERMINATIONS

A. Vaagen is an "owner or operator" as defined in RCW 70.105D.020(17) of a "facility" as defined in RCW 70.105D.020(5) because it is the owner of property on which a release of hazardous substances has occurred or otherwise come to be located.

B. Based upon all factors known to Ecology, a "release" or "threatened release" of "hazardous substance(s)" as defined in RCW 70.105D.020(25) and (10), respectively, has occurred at the Site.

C. Based upon credible evidence, Ecology issued a PLP status letter to Vaagen dated August 24, 2009, pursuant to RCW 70.105D.040, -.020(21), and Chapter 173-340-500 WAC. After providing for notice and opportunity for comment, reviewing any comments submitted, and concluding that credible evidence supported a finding of potential liability, Ecology issued a determination that Vaagen is a PLP under RCW 70.105D.040 and notified Vaagen of this determination by letter dated February 25, 2010.

D. Pursuant to RCW 70.105D.030(1) and -.050(1), Ecology may require PLPs to investigate or conduct other remedial actions with respect to any release or threatened release of hazardous substances whenever it believes such actions to be in the public interest. Based on the foregoing facts, Ecology believes the remedial actions required by this Order are in the public interest.

VII. WORK TO BE PERFORMED

Based on the Findings of Fact and Ecology Determinations, it is hereby ordered that Vaagen take the following remedial actions at the Site and that these actions be conducted in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein.

The remedial actions required by this Order, and conditions related to those remedial actions, are:

A. Vaagen shall provide access to Ecology, any authorized representative of Ecology, and any party or entity directed or authorized by Ecology to the Property and any other real property at or in the vicinity of the Site that Vaagen either owns, comes to own, controls, or has access rights to at all reasonable times for the purpose of investigating and remediating the release of hazardous substances at the Site, including *inter alia*: installing subsurface wells; conducting such tests or collecting such samples as Ecology may deem necessary; using a camera, sound recording, video camera, GPS device, or other documentary type equipment to record work done pursuant to this Order. Ecology or any Ecology-authorized representative shall give reasonable notice before entering any Site property owned or controlled by Vaagen unless an emergency prevents such notice. All persons who access the Site pursuant to this paragraph shall comply with the approved health and safety plan, if any. Ecology employees and their representatives shall not be required to sign any release or waiver as a condition of Site property access.

B. Nothing above shall be construed to limit Ecology's rights under RCW 70.105D.050 or Section VIII.K (Reservation of Rights) of this Order to require that additional

remedial actions be taken by Vaagen, either through an amendment to this Order or through a separate enforcement order or agreed order issued pursuant to RCW 70.105D.050.

VIII. TERMS AND CONDITIONS OF ORDER

A. Public Notice

RCW 70.105D.030(2)(a) requires that, at a minimum, this Order be subject to concurrent public notice. Ecology shall be responsible for providing such public notice and reserves the right to modify or withdraw any provisions of this Order should public comment disclose facts or considerations which indicate to Ecology that this Order is inadequate or improper in any respect.

B. Remedial Action Costs

Ecology will not, under RCW 70.105D and Chapter 173-340 WAC, seek to recover from Vaagen those remedial action costs incurred by Ecology that are covered by legislative appropriation from the Asarco settlement monies described in Section V, paragraph O above.

Ecology reserves its rights under RCW 70.105D, Chapter 173-340 WAC, and Section VIII.K (Reservation of Rights) of this Order to recover costs incurred by Ecology beyond those costs covered by legislative appropriation(s) from the Asarco settlement monies described in Section V, paragraph O above. Nothing in this Order shall be construed to limit any such rights. Such costs shall include work performed by Ecology or its contractors for, or on, the Site under RCW 70.105D, including remedial actions and Order preparation, negotiation, oversight, and administration. Such costs shall include work performed both prior to and subsequent to the issuance of this Order. Such costs shall include costs of direct activities and support costs of direct activities as defined in Chapter 173-340-550(2) WAC.

C. Implementation of Remedial Action

Except where necessary to abate an emergency situation, Vaagen shall not perform any remedial actions at the Site outside those remedial actions required by this Order unless Ecology concurs, in writing, with such additional remedial actions.

D. Designated Project Coordinators

The project coordinator for Ecology is:

Brendan Dowling
WA Department of Ecology
Eastern Regional Office
4601 N. Monroe St.
Spokane, WA 99205-1295
(509) 329-3611

The project coordinator for Vaagen is:
Name:
Address:

Telephone:

Each project coordinator shall be responsible for overseeing the implementation of this Order. Ecology's project coordinator will be Ecology's designated representative for the Site. To the maximum extent possible, communications between Ecology and Vaagen, and all documents including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order shall be directed through the project coordinators. The project coordinators may designate, in writing, working level staff contacts for all or portions of the implementation of the work to be performed required by this Order.

Any party may change its respective project coordinator. Written notification shall be given to the other party at least ten (10) calendar days prior to the change.

E. Sampling, Data Submittal, and Availability

Vaagen is not required to perform any sampling work under this Order; however, as to sampling it may voluntarily perform, Vaagen shall submit proposed plans for Ecology review and approval. The PLP shall make the results of all such sampling, related laboratory reports, and/or test results generated with regard to matters addressed by this Order promptly available to Ecology.

If requested by Ecology, Vaagen shall allow Ecology and/or its authorized representative to take split or duplicate samples of any samples collected by Vaagen pursuant to voluntary work

conducted through implementation of this Order. Vaagen shall notify Ecology seven (7) days in advance of any approved sample collection or work activity at the Site. Ecology shall, upon request, allow Vaagen and/or its authorized representative to take split or duplicate samples of any samples collected by Ecology pursuant to the implementation of this Order, provided that doing so does not interfere with Ecology's sampling. Without limitation on Ecology's rights under Section VII, paragraph A, Ecology will provide the PLP courtesy copies of work documents and shall notify Vaagen prior to any sample collection activity unless an emergency prevents such notice.

F. Public Participation

A Public Participation Plan is required for this Site. Ecology will manage and direct Public Participation. Ecology shall develop a Public Participation Plan.

Ecology shall maintain the responsibility for public participation at the Site. However, Vaagen shall cooperate with Ecology, and shall:

1. Notify Ecology's project coordinator prior to the preparation of all press releases and fact sheets, and before any major meetings with the interested public and local governments. Likewise, Ecology shall notify Vaagen prior to the issuance of all press releases and fact sheets, and before major meetings with the interested public and local governments. For all press releases, fact sheets, meetings, and other outreach efforts by Vaagen that do not receive prior Ecology approval, Vaagen shall clearly indicate to its audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.

2. If requested by Ecology, the PLP agrees to participate in public presentations on the progress of the remedial action at the Site. Participation may be through attendance at public meetings to assist in answering questions or as a presenter.

G. Retention of Records

During the pendency of this Order, and for ten (10) years from the date of completion of work performed pursuant to this Order, Vaagen shall preserve all records, reports, documents, and underlying data in its possession relevant to the implementation of this Order and shall insert

a similar record retention requirement into all contracts with project contractors and subcontractors. Upon request of Ecology, Vaagen shall make all records available to Ecology and allow access for review within a reasonable time.

H. Resolution of Disputes

1. In the event a dispute arises as to an approval, disapproval, proposed change, or other decision or action by Ecology's project coordinator, the Parties shall use the dispute resolution procedure set forth below.

a. Upon receipt of Ecology's project coordinator's written decision, Vaagen has fourteen (14) days within which to notify Ecology's project coordinator in writing of its objection to the decision.

b. The Parties' project coordinators shall then confer in an effort to resolve the dispute. If the project coordinators cannot resolve the dispute within fourteen (14) days, Ecology's project coordinator shall issue a written decision.

c. Vaagen may then request regional management review of the decision. This request shall be submitted in writing to the Eastern Regional Office's Toxics Cleanup Section Manager within seven (7) days of receipt of Ecology's project coordinator's written decision.

d. The Section Manager shall conduct a review of the dispute and shall endeavor to issue a written decision regarding the dispute within thirty (30) days of Vaagen's request for review. The Section Manager's decision shall be Ecology's final decision on the disputed matter.

2. The Parties agree to only use the dispute resolution process in good faith and agree to expedite, to the extent possible, the dispute resolution process whenever it is used.

3. Implementation of these dispute resolution procedures shall not provide a basis for delay of any activities required in this Order, unless Ecology agrees in writing to a schedule extension.

I. Amendment of Order

This Order may only be formally amended by the written consent of both Ecology and Vaagen. Vaagen shall submit a written request for amendment to Ecology for approval. Ecology shall indicate its approval or disapproval in writing and in a timely manner after the written request for amendment is received. If the amendment to this Order represents a substantial change, Ecology will provide public notice and opportunity to comment. Reasons for the disapproval of a proposed amendment to this Order shall be stated in writing. If Ecology does not agree to a proposed amendment, the disagreement may be addressed through the dispute resolution procedures described in Section VIII.H (Resolution of Disputes).

J. Endangerment

Nothing in this Order shall limit the authority of Ecology, its employees, agents, or contractors to take or require appropriate action in the event of an emergency.

K. Reservation of Rights

This Order is not a settlement under RCW 70.105D. Ecology's signature on this Order in no way constitutes a covenant not to sue or a compromise of any of Ecology's rights or authority. Ecology will not, however, take additional enforcement actions against Vaagen regarding PLP remedial actions required by this Order, provided Vaagen complies with this Order.

Ecology nevertheless reserves its rights under RCW 70.105D, including: (a) The right to require additional or different remedial actions at the Site should it deem such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions; and (b) All rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

Notwithstanding the provisions of Section VII, paragraph B and Section VIII.B, Ecology reserves all rights under Chapter 70.105D RCW and Chapter 173-340 WAC to require additional or different remedial actions at the Site should it deem such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions compel remedial actions. Such actions may be at Vaagen's expense. Ecology reserves all rights under RCW 70.105D RCW and Chapter 173-340 WAC to recover remedial action costs from Vaagen that are

not covered by legislative appropriation(s) from the Asarco settlement monies described in Section V, paragraph O above. However, Ecology may not compel such additional remedial actions or seek to recover remedial action costs under the terms of this Order without amendment.

Ecology reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

L. Transfer of Interest in Property

No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Site shall be consummated by Vaagen without provision for continued implementation of all requirements of this Order and implementation of any remedial actions found to be necessary as a result of this Order.

Prior to Vaagen's transfer of any interest in all or any portion of the Site, and during the effective period of this Order, Vaagen shall provide a copy of this Order to any prospective purchaser, lessee, transferee, assignee, or other successor in said interest; and, at least thirty (30) days prior to any transfer, Vaagen shall notify Ecology of said transfer. Upon transfer of any interest, Vaagen shall restrict uses and activities to those consistent with this Order and notify all transferees of the restrictions on the use of the property.

M. Indemnification

Vaagen agrees to indemnify and save and hold the State of Washington, its employees, and agents harmless from any and all claims or causes of action for death or injuries to persons or for loss or damage to property to the extent arising from or on account of acts or omissions of Vaagen, its officers, employees, agents, or contractors in entering into and implementing this Order. However, Vaagen shall not indemnify the State of Washington nor save nor hold its employees and agents harmless from any claims or causes of action to the extent arising out of the negligent acts or omissions of the State of Washington, or the employees or agents of the State, in entering into or implementing this Order.

IX. SATISFACTION OF ORDER

The provisions of this Order shall be deemed satisfied upon Vaagen's receipt of written notification from Ecology that Vaagen has completed the remedial activity required by this Order, as amended by any modifications, and that Vaagen has complied with all other provisions of this Agreed Order.

X. ENFORCEMENT

Pursuant to RCW 70.105D.050, this Order may be enforced as follows:

A. The Attorney General may bring an action to enforce this Order in a state or federal court.

B. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for investigative and remedial actions and orders related to the Site.

C. In the event Vaagen refuses, without sufficient cause, to comply with any term of this Order, Vaagen will be liable for:

a. Up to three (3) times the amount of any costs incurred by the State of Washington as a result of its refusal to comply; and

b. Civil penalties of up to twenty-five thousand dollars ($25,000) per day for each day it refuses to comply.

D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided under RCW 70.105D.060.

Effective date of this Order: 26 September 2011

Vaagen Brothers Lumber Co., Inc.

Name
Vice President
Title
Address: 515 W. 5th
Colville, WA

Telephone: 509-684-5071

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY

Michael A. Hibbler

Section Manager
Toxics Cleanup Program
Eastern Regional Office
Telephone: (509) 329-3568

EXHIBIT A

SITE DIAGRAM

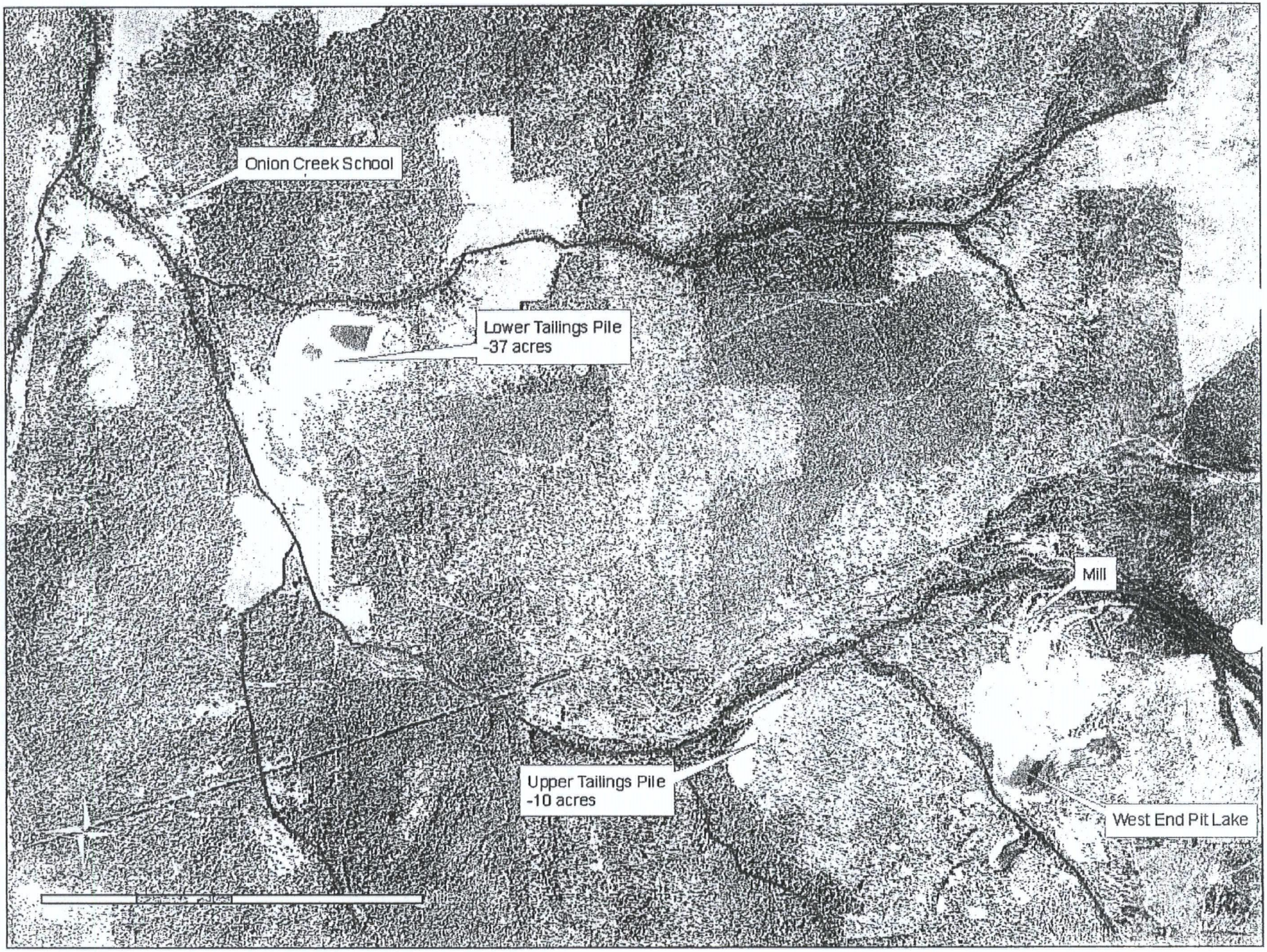

Onion Creek School
Lower Tailings Pile
-37 acres
Mill
Upper Tailings Pile
-10 acres
West End Pit Lake

EXHIBIT B

SCOPE OF WORK

Van Stone Mine
Scope of Work
Remedial Investigation/Feasibility Study

This scope of work is designed to investigate contamination and remedial options at the Van Stone Mine Site (the Site), located at 24 Miles NE of Colville, Washington. The Site includes at least 3 main areas of concern: (1) the historic mill area which includes the adjacent waste rock pile and the open pits, (2) the upper and lower tailings piles and the associated failure areas, and (3) the various tributaries to Onion Creek that are in the surrounding areas that are described in 1 and 2. Planning documents will assess these and potentially other areas of the Site. Contaminants of concern will include metals and other contaminants potentially associated with the mining and milling history of the site. This scope of work will be implemented in order to develop necessary planning documents to conduct a Remedial Investigation/Feasibility Study (RI/FS) for the Site that meets the requirements of the MTCA Cleanup Regulation, Chapter 173-340 WAC.

The RI will document Site history, Site conditions, sources of contamination, fate and transport of contamination, and nature and extent of contamination at the Site. The FS will evaluate remedial alternatives for the Site. The information and data gathered during necessary phases of the RI/FS will be used to identify and determine an appropriate remedial action or if additional investigations may be needed.

The RI/FS to be performed will include the following tasks:

TASK I: RI/FS Project Planning

A. RI/FS Work Plan

Ecology's contractor will prepare a Work Plan outlining procedures for the Remedial Investigation and Feasibility Study (RI/FS). The Work Plan shall include the following information:

1. Facility Background and Preliminary Conceptual Site Model (CSM). This will include the following:

   - General Facility Information, including, but not limited to, legal description of the facility, present owner and/or operator; chronological listing of past owners and/or operators and operational history; adjacent property owners, zoning designations of property and adjacent properties, current site activities/operations, and other pertinent information.

   - Site Conditions Map (s) that illustrates relevant current site features such as property boundaries, proposed facility boundaries, surface topography, surface and subsurface structures, utility lines, well locations, and other pertinent information (for example, surface water bodies near the vicinity of the Site).

All maps will be consistent with the requirements set forth in WAC 173-340-840(4) and be of sufficient detail and accuracy to document all current and future work performed at the Site.

- Locations and logs of all known monitoring wells, groundwater supply wells, and identification of known springs within one mile radius from the site.
- Previous Investigations and Remedial Activities. This will include data reports generated during previous investigations and remedial actions undertaken.
- Data Evaluation and Preliminary conceptual site model (CSM). To the degree possible based on existing information, a CSM as defined in WAC 173-340-200 shall be presented describing the potential migration and exposure pathways. The CSM shall consider known site conditions, hazardous substance fate and transport, and potential receptors.
- Preliminary analysis and presentation of Applicable, Relevant, and Appropriate Requirements (ARARs).
- Preliminary cleanup level analysis.

2. Planning and description of RI/FS Tasks described in Tasks II and III.
3. Project Management – Project Team, roles, and responsibilities.
4. Deliverables and schedule for Tasks II through IV.

B. Sampling and Analysis Plan(s)

Ecology's contractor will prepare a Sampling and Analysis Plan (SAP) to guide and direct Site characterization activities (WAC 173-340-820) and support cleanup selection. One or more phases of investigation may be required during the RI/FS. The initial SAPs prepared for the Site will include, but may not be limited to:

1. Field Investigations, Sampling, and Testing – The field sampling and testing component of the SAP will describe in detail the rationale for data collection, including sampling, testing, and data gathering methods, locations, frequency and other field study procedures that will be used for obtaining data required to complete the RI/FS. This component will include the following:

    a. Discussion on the purpose and objectives of the data collection.

    b. Types of media to be sampled.

    c. Sampling locations and designations, including access considerations.

d. Proposed number and location of monitoring wells, soil borings, test pits, sediment grab samples, soil and sediment bioassay tests and other investigative activities.

e. Monitoring well construction requirements.

f. Number of samples, sampling frequency, and data quality objectives.

g. Supplies and equipment

h. Specific sampling methods, including number and type of Quality Assurance/Quality Control (QA/QC) samples.

i. Shipping and handling arrangements.

j. Laboratory and field analytical procedures, methods, and detection limits.

k. Investigative-derived waste management.

l. Schedule and task assignments.

2. Quality Assurance Project Plan (QAPP)

a. Field QA/QC methods.

b. Chain of custody procedures.

c. Decontamination procedures.

d. Analytical procedures, laboratory analyses and QA/QC methods.

e. Number and type of Quality Assurance/Quality Control (QA/QC) samples.

f. Sample custody procedures, including holding times, containers, and preservation.

g. Electronic data management, archival, and transmittal protocols.

C. Health and Safety Plan

The Health and Safety Plan will conform to the requirements of WAC 173-340-810.

D. Public Participation Plan

A Public Participation Plan will be formed by Ecology staff and will conform to the requirements of WAC 173-340-600.

Task I Deliverables: **Draft RI/FS Work Plan**
Draft Sampling and Analysis Plan
Health and Safety Plan

Final RI/FS Work Plan
Final Sampling and Analysis Plan

SCHEDULE OF TASKS/DELIVERABLES

TASK/DELIVERABLE	DATE
Effective Date	Start
Progress Reports	Every 3 months
Task I. Draft RI/FS Work Plan Draft Sampling and Analysis Plan Health and Safety Plan	90 days after
Final RI/FS Work Plan Final Sampling and Analysis Plan	30 days after receipt of Ecology's comments on the draft RI/FS Plan, draft Sampling and Analysis Plan, and approval to proceed

EXHIBIT C

PUBLIC PARTICIPATION PLAN

EXHIBIT C

VAN STONE MINE SITE

Draft Public Participation Plan

Agreed Order
for a
Remedial Investigation/
Feasibility Study

Prepared by:
Washington State Department of Ecology

Para asistencia en Español: Gretchen Newman (360) 407-6097
Если вам нужно помощь по русский, звоните Tatyana Bistrevesky 509/928-7617

July 2011

Facilitiy Site ID No. 5418085
Cleanup Site ID No. 461

Getting Involved in the Cleanup at the Van Stone Mine Site

The Washington State Department of Ecology (Ecology) encourages the public to learn about and get involved in decision-making opportunities at the Van Stone Mine site. Opportunities are available during specific stages of the investigation and cleanup of zinc, lead, and other metals contamination at the site. The site is located 24 miles northeast of the city of Colville in Stevens County, Washington (See Appendix A – Site Map Figure 1).

The Public Participation Plan (Plan) provides an overview of the Plan itself and the Model Toxics Control Act (MTCA), which guides the formal cleanup process at sites in Washington State. This document also outlines the purpose of the Plan, when public notice will occur, the amount of time the public has to comment, where the potentially affected area is located, and ways the public may get involved in providing feedback. It also provides site background, a community profile, and community concerns.

Purpose of the Plan

The Public Participation Plan has three main purposes:

- To promote public understanding of Ecology's responsibilities, planning, and cleanup activities at the site.
- To serve as a way of gathering information from the public. This information will assist Ecology and the potentially liable persons (PLPs) to conduct the investigation and plan for cleanup in a manner that is protective of human health and the environment.
- To inform the community living near the site, as well as the general public, about cleanup activities and how to contribute to the decision-making process.

Overview of the Public Participation Plan and the Model Toxics Control Act (MTCA)

The Plan is required under authority of the Model Toxics Control Act. MTCA is a "citizen-mandated" law that became effective in 1989 to provide guidelines for the cleanup of contaminated sites in Washington State. This law sets standards to make sure the cleanup of sites is protective of human health and the environment. A glossary of MTCA terms is included as Appendix C of this Plan.

Ecology's Toxics Cleanup Program investigates reports of contamination that may threaten human health and the environment. If contaminants are confirmed during an investigation, the site is generally ranked and placed on a Hazardous Sites List (HSL).

The Van Stone Mine site ranked a one on the Hazardous Sites List. A rank of one represents the highest level of concern and five the lowest. Current and former owners or operators, as well as any other PLPs of a site, may be held responsible for cleanup of contamination based on MTCA. The PLPs identified by Ecology for this site are American Smelting and Refining Company (Asarco), Sundown Holdings Ltd., Equinox Resources (Wash) Inc., Vaagen Brothers Lumber Co. Inc., and Callahan Mining Corporation.

Public participation is an important part of cleanup under the MTCA process. The participation needs are assessed at each site according to the level of public interest and degree of risk posed by

contaminants. Individuals who live near the site, community groups, businesses, government, other organizations and interested parties are provided an opportunity to become involved in commenting on the cleanup process.

The Plan includes requirements for public notice such as: identifying reports about the site and the repositories where reports may be read; providing public comment periods; and holding public meetings or hearings. Other forms of participation may be interviews, citizen advisory groups, questionnaires, or workshops.

Public Participation Grants and Technical Assistance

Additionally, citizen groups living near contaminated sites may apply for public participation grants (during open application periods). These grants help citizens receive technical assistance in understanding the cleanup process and create additional public participation avenues.
NOTE: Ecology currently does not have a citizen technical advisor for providing technical assistance to citizens on issues related to the investigation and cleanup of the site.

Amendments

The Plan was developed by Ecology and complies with the MTCA regulations (Chapter 173-340-600 WAC). It will be reviewed as cleanup progresses and may be amended if necessary. Amendments may be submitted to Ecology's site manager, Brendan Dowling, for review and consideration. Ecology will determine final approval of the Plan as well as any amendments.

How Sites are Cleaned Up

The following is taken from a section of the Model Toxics Control Act regulations. It is intended to provide a brief, general overview of how a site is cleaned up. It is not comprehensive. There are other conditions at a site that may trigger additional aspects of MTCA. Some examples would be Interim Actions necessary to stop an immediate threat to human health and the environment, conducting an Environmental Checklist under the , State Environmental Policy Act (SEPA), Cultural Resources Assessments to determine if there might be impacts to historical native use of the area and other important steps. You may review the details in chapter 173-340 WAC. See the following page for the cleanup steps.

How Sites are Cleaned Up

The rules describing the cleanup process at a hazardous waste site are in chapter 173-340 WAC The following is a general description of the steps taken during the cleanup of an average hazardous waste site. Consult the rules for the specific requirements for each step in the cleanup process.

1. Site Discovery: Sites where contamination is found must be reported to Ecology's Toxics Cleanup Program within 90 days of discovery, unless it involves a release of hazardous materials from an underground storage tank system In that case, the site discovery must be reported to Ecology within 24 hours. At this point, potentially liable persons may choose to conduct independent cleanup without assistance from the department, but cleanup results must be reported to Ecology

2. Initial Investigation: Ecology is required to conduct an initial investigation of the site within 90 days of receiving a site discovery report Based on information obtained about the site, a decision must be made within 30 days to determine if the site requires additional investigation, emergency cleanup, or no further action. If further action is required under the Model Toxics Control Act, Ecology sends early notice letters to owners, operators and other potentially liable persons inviting them to work cooperatively with the department

3. Site Hazard Assessment: A site hazard assessment is conducted to confirm the presence of hazardous substances and to determine the relative risk the site poses to human health and the environment

4. Hazard Ranking: The Model Toxics Control Act requires that sites be ranked according to the relative health and environmental risk each site poses. Working with the Science Advisory Board, Ecology created the Washington Ranking Method to categorize sites using data from site hazard assessments Sites are ranked on a scale of 1 to 5. A score of 1 represents the highest level of risk and 5 the lowest Ranked sites are placed on the state Hazardous Sites List

5. Remedial Investigation/Feasibility Study: A remedial investigation and feasibility study is conducted to define the extent and magnitude of contamination at the site. Potential impacts on human health and the environment and alternative cleanup technologies are also evaluated in this study Sites being cleaned up by Ecology or by potentially liable persons under a consent decree, agreed order or enforcement order are required to provide for a 30 day public review before finalizing the report

6. Selection of Cleanup Action: Using information gathered during the study, a cleanup action plan is developed. The plan identifies preferred cleanup methods and specifies cleanup standards and other requirements at the site A draft of the plan is subject to public review and comment before it is finalized

7. Site Cleanup: Actual cleanup begins when the cleanup action plan is implemented This includes design, construction, operation and monitoring of cleanup actions A site may be taken off the Hazardous Sites List after cleanup is completed and Ecology determines cleanup standards have been met

Review of Documents and Project Contacts

Documents relating to the cleanup may be reviewed at the repositories listed on page 10 of this Plan. If individuals are interested in knowing more about the site or have comments regarding the Public Participation Plan, please contact one of the individuals listed on the following page.

WA Department of Ecology Contacts:	**Potential Liable Persons (PLP) Contacts:**
Brendan Dowling, Site Manager WA State Department of Ecology Toxics Cleanup Program 4601 N. Monroe Spokane, WA 99205 509/329-3611 e-mail bdow461@ecy.wa.gov Carol Bergin, Public Involvement WA State Department of Ecology Toxics Cleanup Program 4601 N. Monroe Spokane, WA 99205 509/329-3546 e-mail cabe461@ecy.wa.gov Kari Johnson, Public Disclosure WA State Department of Ecology 4601 N. Monroe Spokane, WA 99205 509/329-3415 e-mail kajo461@ecy.wa.gov	Mr. Patrick Risken Vaagen Brothers Lumber Co. Inc. Evans, Craven & Lackie, P.S. 818 W. Riverside, Suite 250 Spokane, WA 99201

SITE OVERVIEW

The Agreed Order

The Washington State Department of Ecology proposes to enter into an Agreed Order with Vaagen Brothers Lumber Co., Inc. The Order requires Vaagen to give Ecology access to property that lies within the Van Stone Mine site so a Remedial Investigation and Feasibility Study may be conducted. The site is located 24 miles northeast of the city of Colville off Van Stone Road in Stevens County, Washington (see Appendix A).

Ecology plans to use a contractor to conduct the Remedial Investigation and Feasibility Study. You may see people at the site conducting investigations and sampling in late summer. The purpose of the Remedial Investigation is to gather more information to clearly define the contaminants and where they are located. The purpose of the Feasibility Study is to identify and evaluate cleanup alternatives.

History

The Van Stone Mine site is 24 miles northeast of the city of Colville and about 12 miles southeast of Northport. The mine was discovered in approximately 1920 by a deer hunter named George Van Stone. It is now considered the largest open pit mine in Washington

State. The site is made up of four main areas:

- The location of the former milling facility (now dismantled) and offices.
- Waste rock piles and the mine workings area, including what are now pit lakes.
- The Upper Tailings Pile.
- The Lower Tailings Pile.

The Hecla Mining Company began explorations for metals as early as 1926. In 1950 Asarco built the mill and began operating a 1,000 tons per day milling complex and mine. An Upper Tailings Pile was created about ½ mile down the Onion Creek drainage valley. The tailings pile is used as a storage area for mining wastes. In April of 1961 the tailings pile failed to remain in place and a wall of liquid and tailings went into the Onion Creek drainage.

This event widened Onion Creek by 20 to 30 feet. It destroyed a small cabin, ruined 3 bridges, washed a car away, took out power poles, impacted school property, and blocked a local road down valley. As a result, Asarco created a Lower Tailings Pile further down the valley to store mining wastes. The Lower Tailings Pile was used until 1970. Asarco sold the properties in 1971. In 1990 Equinox resources, Ltd. purchased the mine complex and started operations back up in 1991.

Mining operations stopped in 1993. The Washington State Department of Natural Resources (WADNR) sought out Equinox Resources to begin work to improve the area as required by the Reclamation Plan associated with the Van Stone Mine. This included dismantling the mill and removing the tailings pond and tailings piping lines. A berm was constructed on the Lower Tailings Pile that split the pile in half. On either half are small ponds.

Water ponds have formed in the dormant area where previous mineral work took place. These water ponds are called Pit Lakes. The largest is the West End Pit Lake which is approximately 4 acres. Overflow from this Pit Lake runs into one of the tributaries of Onion Creek which flows adjacent to the Upper Tailings Pile. Another tributary to Onion Creek flows adjacent to the Lower Tailings Pile. These tributaries join together before flowing past the Onion Creek School.

Studies indicate hazardous substances have been released in the past and continue to occur. Past releases have most notably occurred through erosion of the two tailings piles and water getting into the tailings. Surface and groundwater flows on and through the tailings and waste rock piles causing some of the erosion. As erosion occurred, tailings containing heavy metals dispersed within the surrounding forest.

In 2010 the Washington Department of Ecology received a settlement from a lawsuit against American Smelting and Refining Company (Asarco). The lawsuit was based on environmental damages caused by Asarco mining practices to areas in Washington State. Ecology was awarded $3.5 million dollars from the settlement toward cleanup of the Van Stone Mine site. In 2010 the legislature approved $500,000 of the money to be used by Ecology for preparation of a Remedial Investigation and Feasibility Study at the site.

The Agreed Order begins the process for the Remedial Investigation and Feasibility Study.

Contaminants of Concern

Past studies show arsenic, cadmium, copper, lead, mercury, and zinc in soil at the mill area, waste rock piles, and tailings piles exceed state standards. These state standards are based on the Model Toxics Control Act (MTCA) and are for the protection of human health and the environment. Groundwater data collected between 1990 and 1998 showed arsenic, cadmium and lead also exceeded state standards. These contaminants are associated with mining production.

COMMUNITY BACKGROUND

The site is 24 miles northeast of the city of Colville and about 12 miles sortheast of Northport. It is a rural, mountainous area mixed with grasslands, farms, and creeks. Onion Creek lies between these two cities and is the name of the primary residential area near the site.

Most residents look to the Onion Creek School District and Onion Creek General Store, which also houses a local library, as the hub of the community for information and as gathering places. It is a tight-knit community with people from various backgrounds, some of whom like to think of themselves as "off the grid" or "getting away from the mainstream."

The community is predominantly Caucasian and English-speaking with some bilingual residents from the Philippines, Russia, and the Ukraine in outlying areas. Some residents are retired from primary careers and working in secondary positions. People have worked in the mine when it was open; others enjoy family farming, some work in local education jobs. Other locals commute to work in nearby Colville, Northport, and surrounding areas.

Community Concerns

Ecology is conducting community interviews to understand local concerns, find out how people would like to be informed about environmental cleanup at the site, and how they would like to be involved. The following are some of the concerns expressed in interviews conducted to date.

Ecology is reviewing the existing data about the site to gain a better understanding of the history. The Remedial Investigation will provide additional data to help answer some of these questions. Ecology provided preliminary answers based on current information.

Ecology will keep the public informed as new information becomes available.

- **Does the dust on the roads and near the school contain elevated levels of contamination?** It is not known for certain at this time, but most likely no. Should the school and residents be worried? No, based on our current information. The Remedial Investigation will provide more specific data to confirm this perspective.

- **Should citizens be concerned about drinking water, well water, and creek irrigation being contaminated from the tailings?** Ecology will be able to determine the potential risk as information is obtained during the Remedial

Investigation. If there is an immediate risk to human health the public will be notified immediately and steps taken to provide an alternate drinking water source. Onion Creek School District tests their drinking water regularly to ensure it meets state standards for drinking water.

Groundwater data collected in the 1990s from the wells surrounding the Lower Tailings Pile showed occasional elevated levels of some metals (arsenic, cadmium and lead). These levels exceeded state standards. No groundwater data has been collected since 1999. Some elevated levels of contaminants in groundwater may still occur. The extent of potential contamination and risk will be more accurately determined by the Remedial Investigation.

- **Families swim in the creek, animals drink from the creek, and people recreate on or near the tailings piles. Should they be concerned about contaminant levels in these areas?** Until detailed information is obtained from the Remedial Investigation people should avoid recreating on or near the tailings piles or mill site. This includes hiking, bicycling, ATV use, horseback riding, or other recreational activities. The steep side slopes are prone to erosional failures which could pose a risk in addition to potential contamination.

  Do not swim in Onion Creek or the tributaries near the site until there is more information about the water quality. Take measures to keep the dust minimized inside your home and outside on your property if you live near the site. Surface water quality, creek sediments and the tailings piles will all be studied as a part of the RI/FS.

- **What triggered Ecology's involvement now?** A Site Hazardous Assessment was conducted in early 2007. Sites are assessed and ranked on a scale of 1 to 5. One represents the greatest potential risk to human health and the environment and 5 the least. The Van Stone Mine site ranked a one.

  Owners of the site were notified of the ranking. The principal owner at that time, Equinox who was represented by Sundown, wanted to enter into Ecology's Voluntary Cleanup Program (VCP). They were already attempting to fulfill requirements of the Washington State Department of Natural Resources Reclamation Bond and thought they would be able to meet the requirements of Ecology's VCP...After a few years of inactivity, Ecology determined that the VCP process was not being adequately addressed. Ecology moved the site into the formal process under the Model Toxics Control Act (MTCA).

  Additionally, in 2010 the Washington Department of Ecology received a settlement from a lawsuit against American Smelting and Refining Company (Asarco). The lawsuit was based on environmental damages caused to certain areas in Washington State by Asarco mining practices. The bankruptcy court awarded Ecology $3.5 million dollars from the settlement for cleanup of the Van Stone Mine site. In 2010 the legislature approved $500,000 of the settlement money to be used by Ecology for preparation of a Remedial Investigation and Feasibility Study at the site.

- **Why wasn't the restoration of the area completed?** This question would be best answered by Equinox, Sundown, and WADNR.
- **Why isn't one agency completing all of the work rather than having it divided between several agencies with no one "fixing" the problems?** Ecology and WADNR have different agency statements and jurisdictions. WADNR oversees all mineral rights in the State of Washington and oversees all mining activity. In order for a mine to receive a mining permit they must submit a reclamation plan that details the different steps the mine owner will take to restore the land back to a semi-natural state. This law was implemented in 1990 and affected Equinox Resources when they opened the mine back up in the early 1990s.

  It is WADNR's responsibility to ensure that the reclamation plan is completed once mining activities cease before they release any bond money associated with the reclamation permit. Ecology became involved in the site when it was suspected that hazardous materials were released. WADNR does not regulate hazardous materials. As the RI/FS moves forward Ecology will be taking the lead role in addressing the contamination and will be coordinating with WADNR to ensure that the requirements of the reclamation permit are met.

- **How long will it take to get information about the contamination, and will it be shared with the neighborhood?** The Agreed Order that requires the PLPs to conduct the Remedial Investigation and Feasibility Study will be available for public review and comment in late 2010. Ecology will address the questions and comments submitted about the Order and modifications will be made if appropriate. Then, the Remedial Investigation and Feasibility Study will move forward. When a draft Remedial Investigation and Feasibility Study Report is completed it will be made available to the public for review and comment. It is anticipated that a draft RI/FS report will be available for review in early 2012.

  NOTE: If something is discovered during the Remedial Investigation that is an immediate threat to human health and the environment, Ecology will take steps to address it and will notify the public immediately.

Public Participation Activities and Timeline

The following is a list of some of the public participation efforts that will occur until the cleanup actions are completed:

- A **mailing list** has been developed for individuals who live near the site. The potentially affected vicinity covers any adjacent properties and homes and businesses within close proximity to the site, and areas to be investigated. These persons, along with the PLPs, will receive copies of all fact sheets developed regarding the cleanup process via first class mail. Additionally, individuals, organizations, local, state, and federal governments, and any other interested parties will be added to the mailing list as requested. Other interested persons may request to be on the mailing list at any time by contacting Carol Bergin at the Department of Ecology (see page 4 for contact information).

❖ **Public Repositories** are locations where documents may be reviewed. The following locations will contain copies of any documents that go through the public review process related to this site:

WA Department of Ecology
4601 N. Monroe
Spokane, WA 99205-1295
Contact: Ms. Kari Johnson
Public Disclosure Coordinator
509/329-3415

Onion Creek School District
2006 Lotze Creek Road
Colville, WA 99114-8602
509/732-4240

Onion Creek General Store/Rural Library
2191 Onion Creek
Colville WA 99114
509/732-6648

Colville Public Library
195 South Oak Street
Colville, WA 99114
509/684-6620

Ecology's Web Site at
https://fortress.wa.gov/exy/gsp/Sitepage.aspx?/csid=461

❖ **Opportunity to Comment**

- During each stage of cleanup **fact sheets** are created by Ecology, then distributed to individuals on the mailing list. These fact sheets explain the stage of cleanup, the site background, what happens next in the cleanup process and ask for comments from the public.
- A **30-day comment period** allows interested parties time to comment on the process. The fact sheet contains contact information about where to submit comments and where and when public meetings or hearings will be held if requested. The information from these fact sheets is also published in a statewide **Site Register** which is sent to those who request to be on that mailing list. Persons interested in receiving the Site Register should contact Seth Preston at seth.preston@ecy.wa.gov

  The fact sheets are also posted on Ecology's web page under the Toxics Cleanup Program at https://fortress.wa.gov/exy/gsp/Sitepage.aspx?/csid=461

❖ **Display ads or legal notices** are published in the Colville Statesman Examiner and the Sun newspapers, and on Ecology's Public Events Calendar http://www.ecy.wa.gov to inform the general public. Ecology also will work with the Onion Creek School District to provide information for the school newsletter. These notices are published at the beginning of the 30-day comment period for the public notices. They are also used to announce public meetings and workshops or public hearings.

❖ **Public meetings, workshops, open houses, and public hearings** are held based on the level of community interest. If ten or more persons request a public meeting or hearing based on the subject of the public notice, Ecology will hold a meeting or hearing and gather

comments. Ecology will make every effort to hold meetings at a location closest to the majority of residents near the site. Meeting locations must meet specific criteria including ADA requirements. These events are announced using the same methods as display ads or legal notices.

- Flyers may also be made available in various locations throughout the community (e.g., postings at local businesses, schools, libraries, etc.) to announce public comment periods, meetings, workshops, etc.

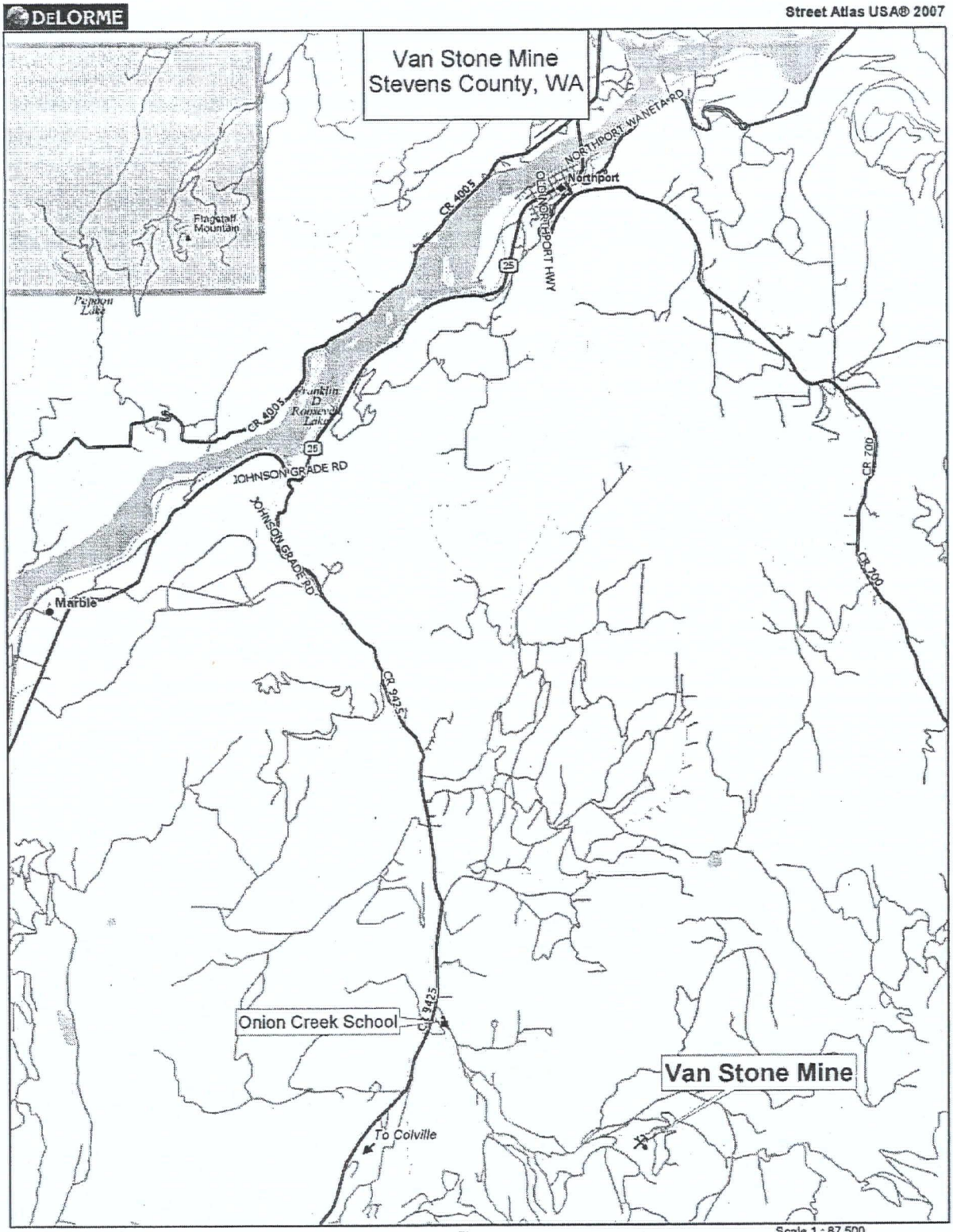
Answering Questions from the Public

If you have questions about fact sheets, documents available for public comment, meetings and hearings, or about the general cleanup process, you are encouraged to contact one of the individuals listed on page 4.

Public Notice and Comment Periods Timeline

DATE	ACTION TAKEN
July 2011	30-day Comment Period: Fact Sheet for Agreed Order for Remedial Investigation and Feasibility Study (Scope of Work and Public Participation Plan)

APPENDIX A
Site Map Figure 1



APPENDIX B
Current Mailing List
(provided upon request)

Van Stone Mine Site

APPENDIX C
GLOSSARY

Agreed Order: A legal document issued by Ecology which formalizes an agreement between the department and potentially liable persons (PLPs) for the actions needed at a site. An agreed order is subject to public comment. If an order is substantially changed, an additional comment period is provided.

Applicable State and Federal Law: All legally applicable requirements and those requirements that Ecology determines are relevant and appropriate requirements.

Area Background: The concentrations of hazardous substances that are consistently present in the environment in the vicinity of a site which are the result of human activities unrelated to releases from that site.

Carcinogen: Any substance or agent that produces or tends to produce cancer in humans.

Chronic Toxicity: The ability of a hazardous substance to cause injury or death to an organism resulting from repeated or constant exposure to the hazardous substance over an extended period of time.

Cleanup: The implementation of a cleanup action or interim action.

Cleanup Action: Any remedial action, except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.

Cleanup Action Plan: A document which identifies the cleanup action and specifies cleanup standards and other requirements for a particular site. After completion of a comment period on a Draft Cleanup Action Plan, Ecology will issue a final Cleanup Action Plan.

Cleanup Level: The concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

Cleanup Process: The process for identifying, investigating, and cleaning up hazardous waste sites.

Consent Decree: A legal document approved and issued by a court which formalizes an agreement reached between the state and potentially liable persons (PLPs) on the actions needed at a site. A decree is subject to public comment. If a decree is substantially changed, an additional comment period is provided.

Containment: A container, vessel, barrier, or structure, whether natural or constructed, which confines a hazardous substance within a defined boundary and prevents or minimizes its release into the environment.

Contaminant: Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

Enforcement Order: A legal document, issued by Ecology, requiring remedial action. Failure to comply with an enforcement order may result in substantial liability for costs and penalties. An enforcement order is subject to public comment. If an enforcement order is substantially changed, an additional comment period is provided.

Environment: Any plant, animal, natural resource, surface water (including underlying sediments), ground water, drinking water supply, land surface (including tidelands and shorelands) or subsurface strata, or ambient air within the state of Washington.

Exposure: Subjection of an organism to the action, influence or effect of a hazardous substance (chemical agent) or physical agent.

Exposure Pathways: The path a hazardous substance takes or could take form a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from the site. Each exposure pathway includes an actual or potential source or release from a source, an exposure point, and an exposure route. If the source exposure point differs from the source of the hazardous substance, exposure pathway also includes a transport/exposure medium.

Facility: Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed or, placed, or otherwise come to be located.

Feasibility Study (FS): A study to evaluate alternative cleanup actions for a site. A comment period on the draft report is required. Ecology selects the preferred alternative after reviewing those documents.

Free Product: A hazardous substance that is present as a nonaqueous phase liquid (that is, liquid not dissolved in water).

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Hazardous Sites List: A list of sites identified by Ecology that requires further remedial action. The sites are ranked from 1 to 5 to indicate their relative priority for further action.

Hazardous Substance: Any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) (any discarded, useless, unwanted, or abandoned substances including, but not limited to, certain pesticides, or any residues or containers of such substances which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes; (a) have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or (b) are corrosive, explosive, flammable, or may generate pressure through decomposition or other means,) and (6) (any dangerous waste which (a) will persist in a hazardous form for several years or more at a disposal site and which in its persistent form presents a significant environmental hazard and may affect the genetic makeup of man or wildlife; and is highly toxic to man or wildlife; (b) if disposed of at a disposal site in such quantities as would present an extreme hazard to man or the environment), or any dangerous or extremely dangerous waste as designated by rule under Chapter 70.105 RCW: any hazardous substance as defined in RCW 70.105.010 (14) (any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste as described in rules adopted under this chapter,) or any hazardous substance as defined by rule under Chapter 70.105 RCW; petroleum products.

Hazardous Waste Site: Any facility where there has been a confirmation of a release or threatened release of a hazardous substance that requires remedial action.

Independent Cleanup Action: Any remedial action conducted without Ecology oversight or approval, and not under an order or decree.

Initial Investigation: An investigation to determine that a release or threatened release may have occurred that warrants further action.

Interim Action: Any remedial action that partially addresses the cleanup of a site.

Mixed Funding: Any funding, either in the form of a loan or a contribution, provided to potentially liable persons from the state toxics control account.

Model Toxics Control Act (MTCA): Washington State's law that governs the investigation, evaluation and cleanup of hazardous waste sites. Refers to RCW 70.105D. It was approved by voters at the November 1988 general election and known is as Initiative 97. The implementing regulation is WAC 173-340.

Monitoring Wells: Special wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths and studied to determine the direction of groundwater flow and the types and amounts of contaminants present.

Natural Background: The concentration of hazardous substance consistently present in the environment which has not been influenced by localized human activities.

National Priorities List (NPL): EPA's list of hazardous waste sites identified for possible long-term remedial response with funding from the federal Superfund trust fund.

Owner or Operator: Any person with any ownership interest in the facility or who exercises any control over the facility; or in the case of an abandoned facility, any person who had owned or operated or exercised control over the facility any time before its abandonment.

Polynuclear Aromatic Hydrocarbon (PAH): A class of organic compounds, some of which are long-lasting and carcinogenic. These compounds are formed from the combustion of organic material and are ubiquitous in the environment. PAHs are commonly formed by forest fires and by the combustion of fossil fuels.

Potentially Liable Person (PLP): Any person whom Ecology finds, based on credible evidence, to be liable under authority of RCW 70.105D.040.

Public Notice: At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city or county) newspaper of largest circulation; and opportunity for interested persons to comment.

Public Participation Plan: A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

Recovery By-Products: Any hazardous substance, water, sludge, or other materials collected in the free product removal process in response to a release from an underground storage tank.

Release: Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

Remedial Action: Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance and any health assessments or health effects studies.

Remedial Investigation (RI): A study to define the extent of problems at a site. When combined with a study to evaluate alternative cleanup actions it is referred to as a Remedial Investigation/Feasibility Study (RI/FS). In both cases, a comment period on the draft report is required.

Responsiveness Summary: A compilation of all questions and comments to a document open for public comment and their respective answers/replies by Ecology. The Responsiveness Summary is mailed, at a minimum, to those who provided comments and its availability is published in the Site Register.

Risk Assessment: The determination of the probability that a hazardous substance, when released into the environment, will cause an adverse effect in exposed humans or other living organisms.

Sensitive Environment: An area of particular environmental value, where a release could pose a greater threat than in other areas including: wetlands; critical habitat for endangered or threatened species; national or state wildlife refuge; critical habitat, breeding or feeding area for fish or shellfish; wild or scenic river; rookery; riparian area; big game winter range.

Site: See Facility.

Site Characterization Report: A written report describing the site and nature of a release from an underground storage tank, as described in WAC 173-340-450 (4) (b).

Site Hazard Assessment (SHA): An assessment to gather information about a site to confirm whether a release has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release. If further action is needed, an RI/FS is undertaken.

Site Register: Publication issued every two weeks of major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (360) 407-7200.

Surface Water: Lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the State of Washington or under the jurisdiction of the State of Washington.

TCP: Toxics Cleanup Program at Ecology

Total Petroleum Hydrocarbons (TPH): A scientific measure of the sum of all petroleum hydrocarbons in a sample (without distinguishing one hydrocarbon from another). The "petroleum hydrocarbons" include compounds of carbon and hydrogen that are derived from naturally occurring petroleum sources or from manufactured petroleum products (such as refined oil, coal, and asphalt).

Toxicity: The degree to which a substance at a particular concentration is capable of causing harm to living organisms, including people, plants and animals.

Underground Storage Tank (UST): An underground storage tank and connected underground piping as defined in the rules adopted under Chapter 90.76 RCW.

Washington Ranking Method (WARM): Method used to rank sites placed on the hazardous sites list. A report describing this method is available from Ecology.